REMARKS

The Examiner objected to the disclosure "because of the following informalities: the sub-title including the 'Cross reference to Related Application' and the paragraph claiming priority is missing." The specification is hereby amended to include cross reference and reference to priority.

The Examiner also stated: "In addition, in page 2, line 19, the legend '2' should be -1- because the cross-sectional line 2-2 is in figure 1 and not figure 2. Appropriate correction is required." The referenced correction is hereby made.

The Examiner rejected claims 1-6 "under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, line 1, the term 'type' render (sic) the claim indefinite because it is not clear as to what type of idler is being referred to." The phrase "of the type" is deleted by this amended.

The Examiner rejected claims 1-13 "under 35 U.S.C. 102(b) as being anticipated by Bruchner et al. (5,820,503). Bruchner et al. discloses an idler having a pulley supported by a bearing (2) and the bearing mounted on a tension-adjusting member (3), wherein the tension-adjusting member is in communication with a dual function fastener." (emphasis added)

Simple stated, Bruchner et al. does not disclose or in any way suggest a dual function fastener. The instant application describes the dual function fastener in substantial detail: "Locked-center idler 10 also includes dual function fastener 24. Dual function fastener 24 has shaft 26, upon which are threads 28. Dual function fastener also includes head 30 which is depicted as hexagonal. ... Extending radially from shaft 28 and adjacent to head 30 is flange 32. Flange 32 further includes reaction mating surface 34 and annular recess 36. The average radius of the contact of reaction mating surface 34 upon reaction friction surface 25 is defined as reaction radius R1. The average radius of the contact of resistance friction surface 27 upon mount 38 is defined as R2.

In practice, automatic locked-center idler 10 is assembled as depicted in Figures 1 and 2. Automatic locked-center idler 10 is placed upon mount 38. Mount 38 can be the cylinder block of an internal combustion engine or a separate structure that is immobile in reference to the cylinder block. Power transmission belt 40 is trained about pulley 18. Dual function fastener 24 is threaded into mating threads (not depicted) of mount 38. Dual function fastener

24 is tightened. As dual function fastener 24 is tightened: 1) tensioning member 12 is clamped between mount 38 and reaction mating surface 34; and, 2) flange 32 and reaction mating surface 34 rotate.

It is fundamental that the torque generated by the reaction friction between reaction friction surface 25 and reaction mating surface 34, the reaction torque, is greater than the torque generated by the resistance friction between resistance friction surface 27 and mounting surface 42 of mount 38, the resistance torque." (see page 3 lines 8-27)

"In the embodiment depicted in Figures 1 and 2, with radius R1 larger than radius R2, as dual function fastener 24 is tightened, tensioning member 12 is rotated. Because of the placement of eccentric bore 22, tightening member 12 and pulley 18 move toward belt 40. This leads to a longer path for belt 40 and tightening of belt 40. Once belt 40 reaches a certain degree of tension, the reaction torque minus the resistance torque will no longer be enough to continue to rotate tightening member 12 and slippage will occur between reaction friction surface 25 and reaction mating surface 34. Sometime after this point, dual function fastener is no longer tightened. Belt 40 will have been tightened to the desire setting. Also, automatic locked-center idler will have been affixed to mount 38. The ratio of radius R1 and radius R2 can be chosen to either produce a tension on belt 40 merely enough to remove the slack from the belt or any other operating amount.

Optional annular recess 36 is depicted in this embodiment. Annular recess 36 allows greater control over the point at which tensioning member 12 no longer rotates in response to belt tension. It both makes the mating area of reaction friction surface 25 and reaction mating surface 34 more consistent during tightening of dual function fastener 24 and allows give in flange 32 so that the point at which automatic locked-center idler is adequately fixed to mount 38 is less critical." (see page 4 line 24 through page 5 line 9)

In short, rotation of the components of the dual function fastener 24 gives rise to countervailing frictional forces that ultimately balance with the reaction of the power transmission belt to achieve both an appropriate tension upon power transmission belt 40 and to secure the tensioner in place. There are neither frictional components nor frictional forces involved in the tensioner of Bruchner et al. that cooperate in the creation of appropriate tension upon the power transmission belt.

Independent claims 1 and 7 and their dependents 5-6 and 8-12, respectively, all include the limitation of the inclusion of a dual function fastener not disclosed or suggested by Bruchner et al. Accordingly, the applicant believes these claims are not anticipated by Bruchner et al. and are in condition for allowance. Claim 13 includes the limitations of "applying tension to said power transmission belt by applying a tightening torque to said dual function fastener, and fixing the position of said tension adjusting member by applying said tightening torque to said dual function fastener." (emphasis added) Accordingly, claim 13 claims a single tightening torque to both apply appropriate tension to the belt and fix the position of the tensioner. This method would not cause the tensioner of Bruchner et al. to fulfill its intended function. The applicant also believes this claim is not anticipated by Bruchner et al. and is condition for allowance.

In light of the foregoing amendments and remarks, allowance of all claims is respectfully solicited. If issues remain and the Examiner feels that it would expedite prosecution, the examiner is urged to call the undersigned.

Respectfully submitted,

Steven G. Austin
Attorney for the Applicants
Reg. No. 34,541
The Gates Corporation
IP Law Department 10-A3
1551 Wewatta Street
Denver, CO 80202
(303) 744-5796

SGA
Denver, Colorado